






 Pencil
 Eraser
 Highlighter
 Text
 Image
 Shape
 Table
 Form
 Diagram
 Flowchart
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram
 Diagram

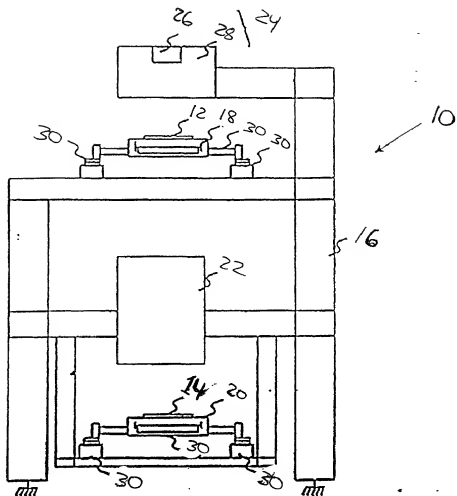


FIG. 1
Prior Ant

FIG. 2

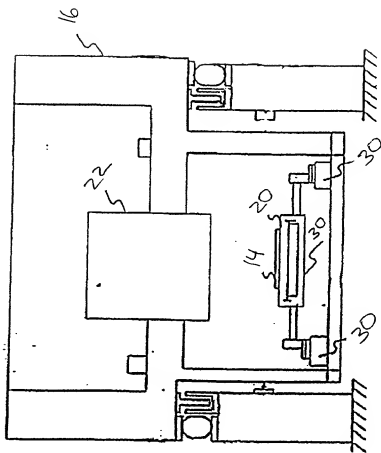
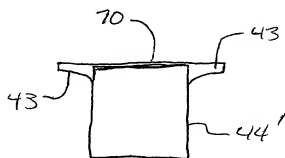
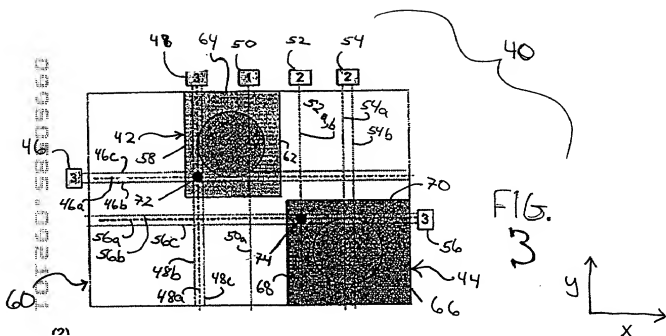


FIG. 2
Prior Art



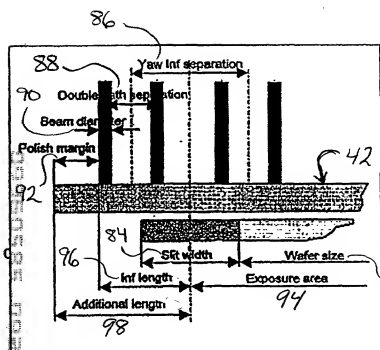


FIG. 46

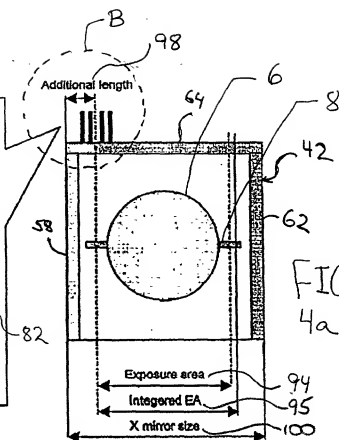


FIG. 4a

Hand-drawn diagram illustrating a mechanical margin layout on a page. The diagram shows a rectangular page with various dimensions and shaded areas.

Key dimensions and labels:

- Top width dimension: 80
- Top height dimension: 98
- Mechanical margin dimension: 112
- Shaded area (top-left): 72
- Shaded area (bottom-right): 74
- Other labels: 46, 48, 50, 52, 54, 56, 44

A note at the bottom indicates: X Swept area 114

FIG. 8

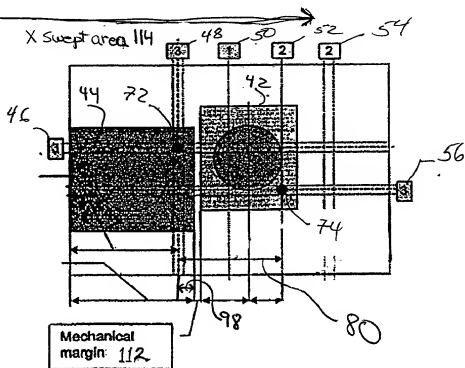


FIG. 9

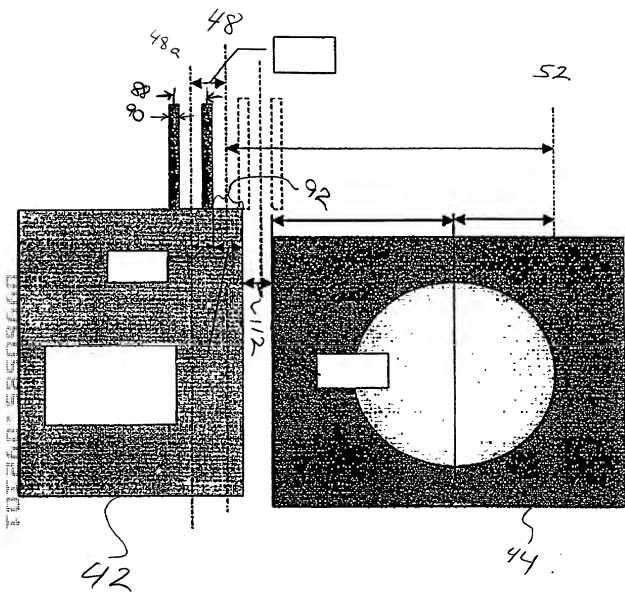


FIG. 10

TOP SECRET

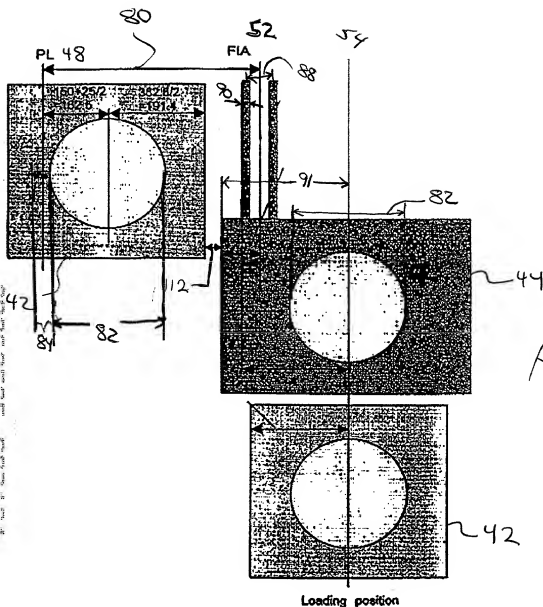
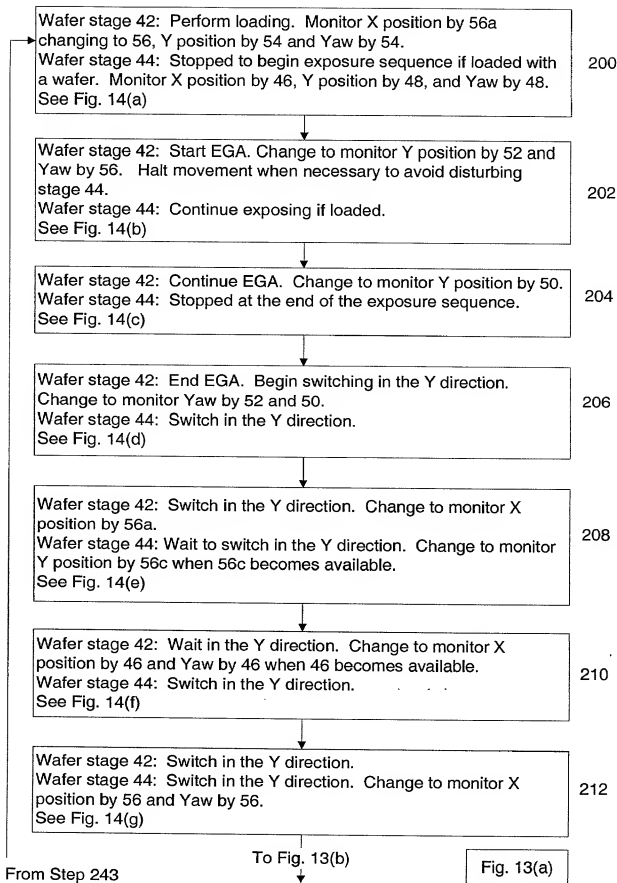
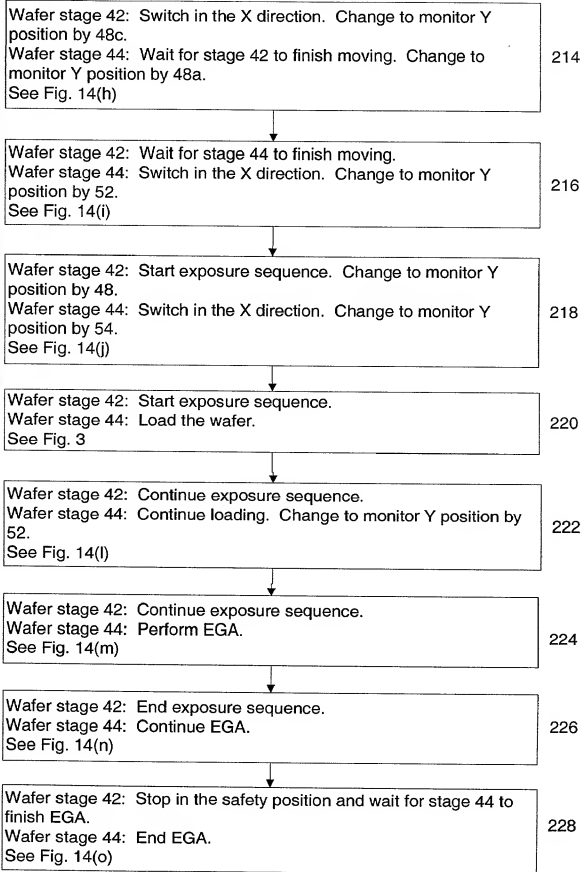


FIG. 11

Loading position



To Fig. 13(a)
and step 200



To Fig. 13(c)

Fig. 13(b)

To Fig. 13(a)
and step 200

From Fig. 13(b) and step 228

Wafer stage 42: Stop in the safety position.
Wafer stage 44: Switch in the X direction.
See Fig. 14(p) 230

Wafer stage 42: Switch in the X direction. Change to monitor Y position by 50.
Wafer stage 44: Wait for 48a to become available to control Y position. Resume switching in the X direction.
See Fig. 14(q) 232

Wafer stage 42: Continue switching in the X direction.
Wafer stage 44: Wait in the switch X/wait position. Change to monitor Y position by 48a.
See Fig. 14(r) 234

Wafer stage 42: Continue switching in the X direction. Change to monitor Y position by 52.
Wafer stage 44: Wait in the switch X/wait position. Change to monitor Y position by 48 and Yaw by 48.
See Fig. 14(s) 236

Wafer stage 42: Continue switching in the X direction. Change to monitor Y position by 54 and Yaw by 54.
Wafer stage 44: Wait in the switch X/wait position.
See Fig. 14(t) 238

Wafer stage 42: Switch in the Y direction. Change to monitor X position by 56a.
Wafer stage 44: Switch in the Y direction. Change to monitor X position by 56c.
See Fig. 14(u) 240

To Fig. 13(d)

FIG 13(c)

2025 RELEASE UNDER E.O. 14176

To Fig. 13(a)
and step 200

From Fig. 13(c) and step 240

Wafer stage 42: Wait in the switchY/wait position then move to the loading position.
Wafer stage 44: Continue switching in the Y direction and attain the position to begin the exposure sequence. Change to monitor X position by 46.
See Fig. 14(v)

242

Yes

Continue to
process more
wafers ?

243

No

Wafer stage 42: Unload but do not reload. Change to monitor X position by 56.
Wafer stage 44: Start exposure sequence.
See Fig. 14(a)

244

Wafer stage 42: Move through the EGA movements without performing EGA, halting to avoid disturbing stage 44. Change to monitor Y position by 52 and Yaw by 56.
Wafer stage 44: Continue the exposure sequence.
See Fig. 14(b)

246

Wafer stage 42: Change to monitor Y position by 50.
Wafer stage 44: Stop at the end of the exposure sequence.
See Fig. 14(c)

248

Wafer stage 42: Switch in the Y direction. Change to monitor Yaw by 52 and 50.
Wafer stage 44: Switch in the Y direction.
See Fig. 14(d)

250

To Fig. 13(e)

Fig. 13(d)

From Fig. 13(d)

Wafer stage 42: Switch in the Y direction. Change to monitor X position by 56a.
Wafer stage 44: Pause and wait for 56c to become available to control X position.
See Fig. 14(e)

252

Wafer stage 42: Pause and wait for 46 to become available to control X position.
Wafer stage 44: Switch in the Y direction.
See Fig. 14(f)

254

Wafer stage 42: Switch in the Y direction.
Wafer stage 44: Switch in the Y direction. Change to monitor X position by 56 and Yaw by 56.
See Fig. 14(g)

256

Wafer stage 42: Switch in the X direction. Change to monitor Y position by 48c.
Wafer stage 44: Pause and wait for stage 42 to stop moving. Change to monitor Y position by 48b.
See Fig. 14(h)

258

Wafer stage 42: Pause switching in the X direction and wait for stage 44 to stop moving.
Wafer stage 44: Switch in the X direction. Change to monitor Y position by 52.
See Fig. 14(i)

260

Wafer stage 42: Change to monitor Y position by 48.
Wafer stage 44: Remove exposed wafer. Change to monitor Y position by 54.
See Fig. 14(j)

262

End Process

Fig. 13(e)

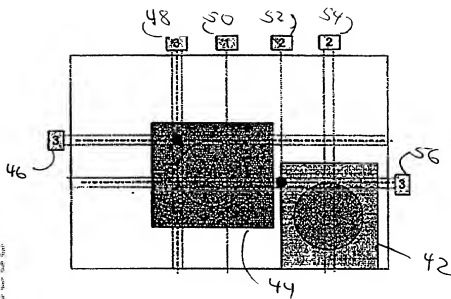


FIG.

14(a)

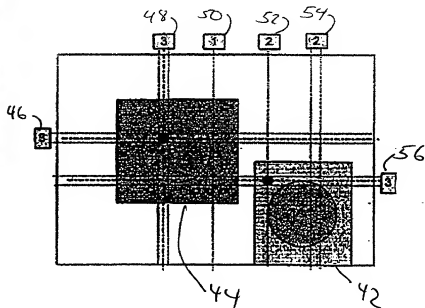
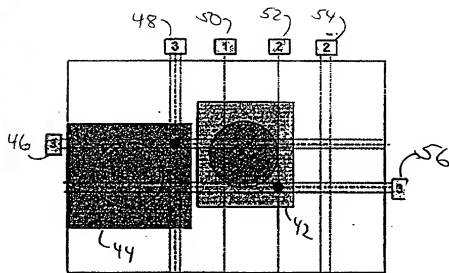
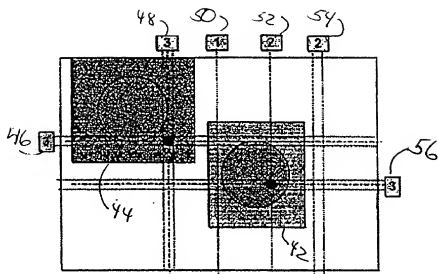


FIG.

14(b)



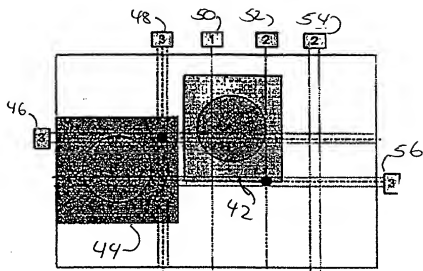


FIG.
14(e)

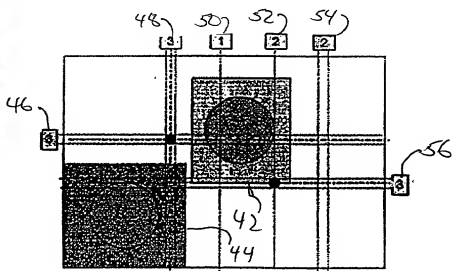
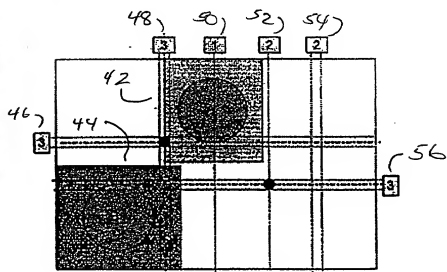
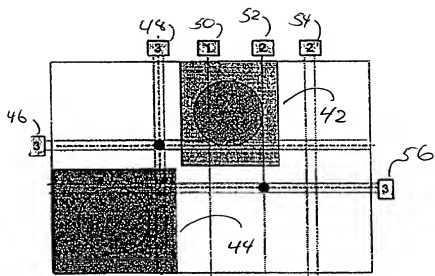


FIG.
14(f.)



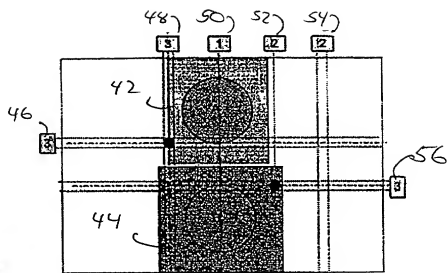


FIG.
14(i)

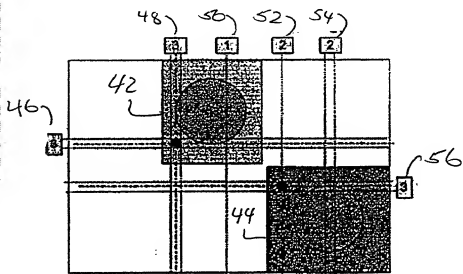
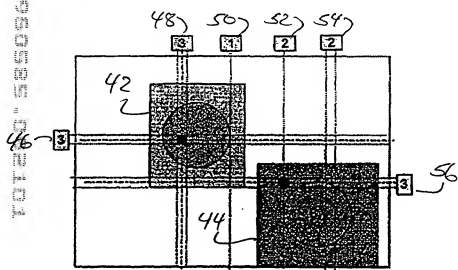
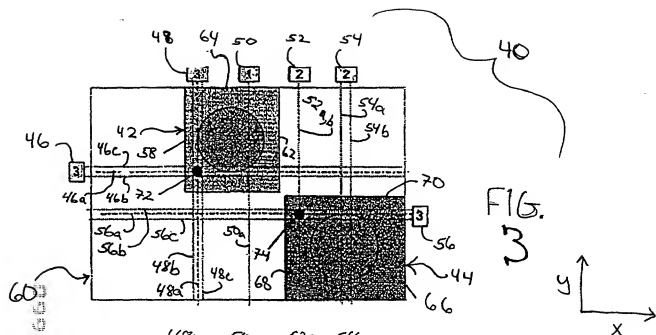
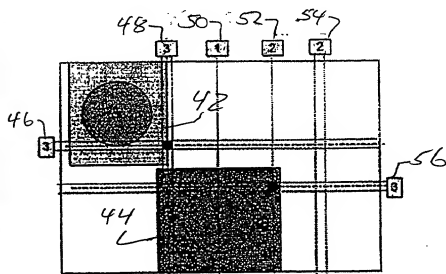
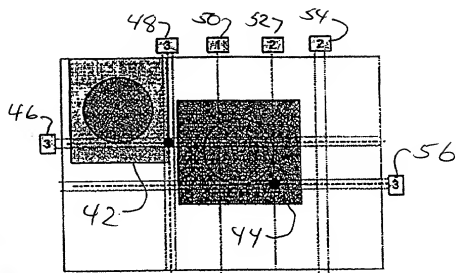


FIG.
14(j)





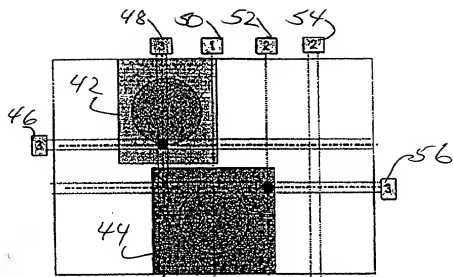


FIG.
14(g)

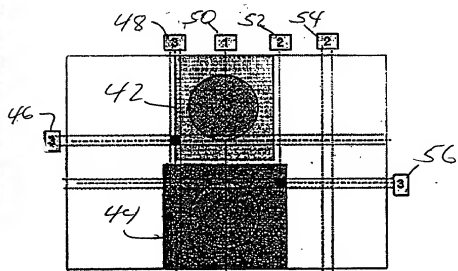
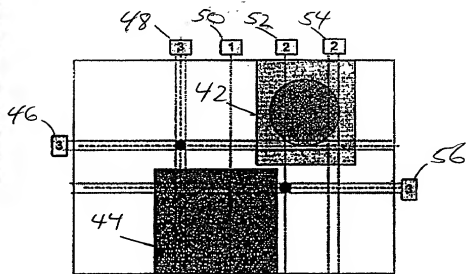
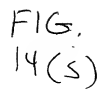
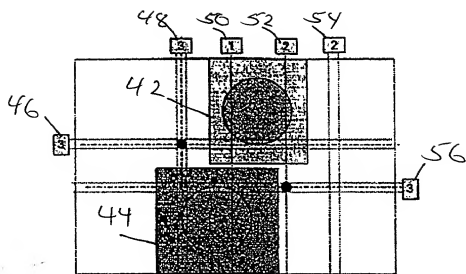


FIG.
14(r)



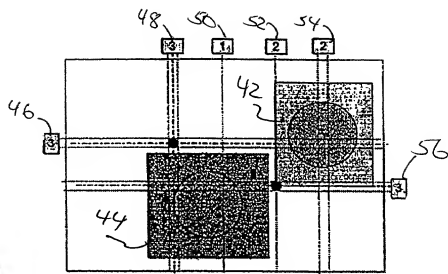


FIG.
14(u)

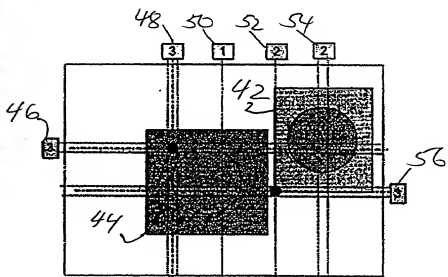


FIG.
14(v)